

RS 2001-15

IN-0509-17

Shills, Graves & Associates, Inc.

P. O. Box 521

Notre Dame, Ind. 46556

June 5, 1970

Soil and Foundation Consultants
Materials Testing Services

Laboratory located at
1119 South Bend Ave.
Phone 233-6820

Schulman & Graves
S. L. Schill
Gertrude St

Engineering Planning Services
1520 North Main Street
Mishawaka, Indiana 46544

DEC 1 3

EPA Region 5 Records Ctr.



301523

Gentlemen:

As requested by Mr. Richardson, we have investigated the soil conditions at a site on the west side of Gertrude Street and on the north side of Chippewa Street (extended) in South Bend, Indiana. The site extends approximately 1650 feet along Gertrude and 1340 feet along the extension of Chippewa. Our investigation has consisted of studying the geology of the area, reading the soil map of the area and making 10 power auger soil borings from 10 to 38 feet deep.

Geology tells us that the site is in the Maxinkuckee glacial moraine area near the Kankakee glacial outwash area, so the soils are likely to be unsorted silts, clays and sands and gravels with a tendency for the layers of sand and gravel to be interspersed with layers of silt or clay. Shale bedrock is some 200 feet below the surface. Wells in the immediate vicinity are about 100 feet deep and draw their water from about elevation 700 which is 80 to 100 feet below the surface of the site.

The soil map shows that the surface soils on the southeast and northwest corners of the site are sands and gravels and the central portion is imperfectly drained silts and clays. At the north central portion the natural surface soil was muck, but this has been covered with fill for many years.

The soil borings were made to determine the character of the soil below the immediate surface. The logs of the 10 soil borings are attached hereto. The soil borings show that the soil in Area 1 and 2 are sands and gravel to depths of about 25 feet where a layer of clay occurs and then more sand and gravel. The water table in these areas is at about elevation 784, because a clay layer keeps the water from percolating downward and Gertrude Street keeps it from flowing easterly to its natural surface outlet. The soil in Area 3 is all silt and clay to depths of 25 and more feet. The water table is about 25 feet below the surface. The soil in Area 4 is 6 to 8 feet of silty sand underlaid by 7 or more feet of clay and then more sand. The water is pocketed in the silty sand above the clay. Area 5 is the fill area where a thick clay layer underlies the fill and the water is at the natural ground surface.

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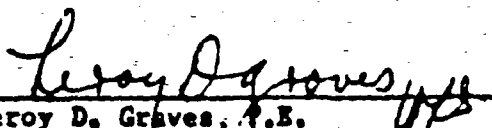
- 2 -

Engineering Planning Services

This site is excellent for a properly operated sanitary landfill. Areas 1 and 2 have excellent soil for covering soil. Areas 3 and 4 have deep clays where trenches can be excavated to receive the solid waste. Wells in the vicinity are so deep and protected by clay layers that they cannot be polluted by the landfill.

Sincerely,

SHILTS, GRAVES & ASSOCIATES, INC.


Leroy D. Graves, P.E.
Secretary & Treasurer

LDG:gem

Shultz, Graves & Associates, Inc.

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Foundation Consultants
Testing Services

SOIL BORING
Gertrude Street Site
South Bend, Indiana

Boring 1

Depth Feet

0 - 1.0
1.0 - 8.5
8.5 - 10.0

Soil Description

Dark brown sandy topsoil
Brown silt and sand
Gray brown mottled silty clay
~~Water table at 1.2'~~

Boring 2

0 - 13.0

Brown sand

Boring 3

0 - 13.0

Brown sand and fine gravel

Boring 4

0 - 14
14 - 19
19 - 23

Brown silty clay
Gray silty clay
Brown sand trace clay

Boring 5

0 - 1.0
1.0 - 15.0
15.0 - 33.0

Brown clayey topsoil
Brown silty clay
Gray silty clay or clayey silt
~~Water at 26'~~

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SOIL BORING

Gartrude Street Site
South Bend, Indiana

Boring 6

Depth Feet

0	-	1.0
1.0	-	14.0
14.0	-	18.0
18.0	-	25.0
25.0	-	28.0

Soil Description

Brown clayey topsoil
Brown silty clay
Gray silty clay
Brown silty clay
Brown silty sand

Boring 7

0	-	1.0
1.0	-	6.0
6.0	-	13.0
13.0	-	15.0

Brown sandy topsoil
Brown silt and sand
Gray silty clay
Brown medium sand

Boring 8

0 - 10.0

Miscellaneous fill

Boring 10

0	-	1.0
1.0	-	7.0
7.0	-	10.0

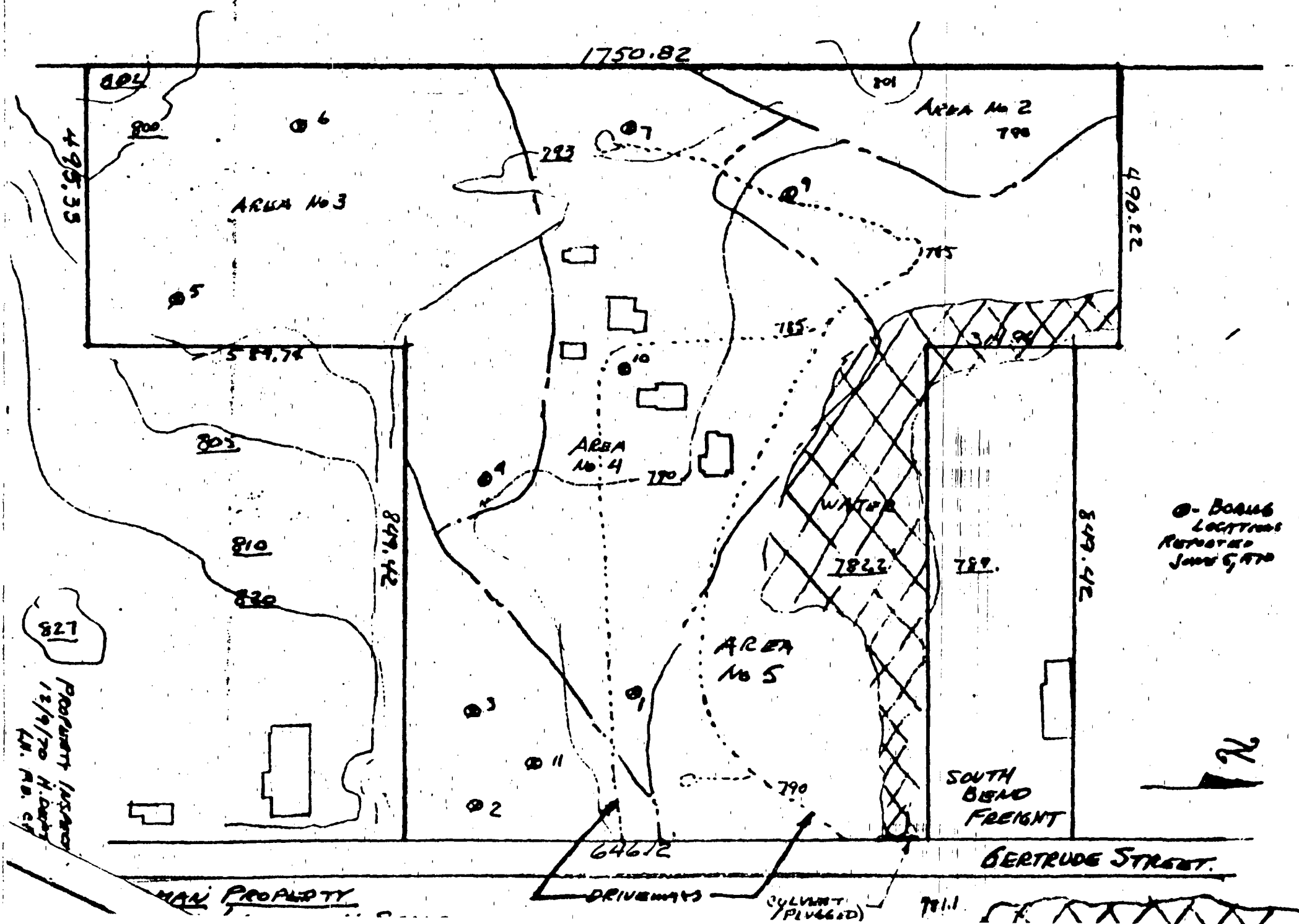
Dark brown sandy topsoil
Brown silty sand
Gray brown mottled silty clay
Water at 4'

Boring 11

0	-	26
26	-	30
30	-	38

Brown silty sand and gravel
Brown silty clay
Brown silty sand and gravel
Water at 16'

DRILLING • TESTING • ENGINEERING • INSPECTION



● - Borehole
Locations
Retrieved
June 5, 1970

N

SOUTH
BEND
FREIGHT

GERTRUDE STREET.

MAN PROPERTY

DRIVEWAY

CYLINDER
(PIVOTED)

71.1

PROPERTY LINES
12/9/70 H. B. B. B.
L. B. B. B.

STREAM SEWAGE
and
INDUSTRIAL WASTE

DEC 1970

Lab Nos.	Date	Source	Samples				Dets.		Remarks
			S-P	SEW	LW.	Misc	Coli Chem	F.C. Baet.	
6616-6628	1	WQ RB	13				12		F.S.
6629-6633	1	WQ RB	5				5		
6634	1	SPEEDWAY SRK		1					
6635-6643	2	WALKERTON CANTWELL	3					6	
6644-6652	3	TIPTON CARTER	3					3	
6653-6655	3	WALKERTON CARTER	3					3	
6656-6657	3	KNIGHTSTOWN GOUGH			2				
6658-6673	3	WQ RB	16				15		
6674-6677	4	D.W. DYKE				4			
6678	4	W.D. SOLLERS & SANCOS HOME SRK				1			
6679-6681	4	NOTRE DAME SRK				3			
6682-6683	7	S. BEND NYE			2				
6684	7	ROCHESTER GREEN				1			
6685-6686	7	SPEEDWAY STEEG				2			
6687-6712	9	WQ SHIPPEN	26				19	14	4
6713	9	LEVER BROS. RB	1						
6714-6718	9	SHEPARD FEED L. HUNT			5		5		5
6719-6722	9	LELANCH CANTWELL	4					4	
6723-6731	10	WQ RB	9				9		
6732-6733	9	LAIES RB	2					2	
6734	11	E. CHI STP	1				1	1	
6735-6739	11	CLINTON BAILEY	4				4	4	
6740-6743	11	WQ RB	5				5		
6744-6745	14	BERNE NYE			2				
6746	11	HUNTINGBURG STEVENS			1				
6747	14	WQ MAIL	1						
6748	15	EVANSVILLE GREEN				1			
6749-6750	15	FRANKFERT MAIL				2			
6751-6752	15	BLOOMINGTON MAIL				2	2		
6753-6768	15	WQ RB	16				14		
6769-6770	16	HARTFORD CITY GOUGH			2				
6771-6772	16	BEDFORD GOUGH			2				

72

1936
- 18
1774

1779